

98-445227/38 MOSC MED ACAD 96.01.17 96RU-101025 (98.02.10) G01N 33/497	B04 D16 *RU 2104535-C1	MOME= 96.01.17 B(4-B4H, 4-B4M, 4-L3, 7-D13, 11-C7B1, 12-K4) D(5-A2A, 5-H9) .6
Determination of pro-superoxide activity from exhaled air - by incubating with animal tissue in presence of nitro:blue tetrazolium and superoxide dismutase and analysing product(s) spectrophotometrically (Rus) C98-134972	Addnl. Data: KOGAN A KH, GEPPE N A, ZEZEROV E G	The method may be used in medicine (especially pathophysiology and pulmonology) for, e.g. diagnosing or monitoring the treatment of internal organ diseases, and assessing air quality.
Determination of prosuperoxide activity of exhaled air from patients or healthy individuals by investigating its effect on biopsy tissue from an animal, is new.		<u>ADVANTAGE</u> The method allows various pathological states to be investigated in the living organism.
The tissue is incubated with nitroblue tetrazolium (I) and superoxide dismutase (II) in the presence of exhaled air samples from the patient and a healthy individual (control). The product from the reaction between the superoxide anion- radical and (I) (especially formazans) is extracted with an organic solvent, followed by spectrophotometric determination of formazan concentration. Prosuperoxide activity of the exhaled air sample is then calculated from the difference between absorbance readings for the patient and control.	<u>EXAMPLE</u> A biopsy sample from a mouse liver (3 mg) was washed, granulated, then incubated for 1 hour with buffer solution (0.3 ml), compound (II) (250 µg in 0.2 ml buffer solution), 3% NADPH (0.1 ml), 0.2% (I) solution (0.2 ml) and exhaled air from a bronchial asthma patient (730 mm Hg). The difference in absorbance readings for this sample (0.196 units) and air from a healthy subject (0.084) represented the prosuperoxide activity of the patient's exhaled air sample. (DB) (4pp2305DwgNo.0/0)	<u>USE</u> RU 2104535-C

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